

## Advances in the treatment of psoriasis: biologic therapies.

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### Introduction

Psoriasis is a chronic inflammatory skin condition characterized by the presence of red, scaly patches on the skin. It is caused by an abnormal immune response, leading to an overproduction of skin cells. While various treatment options exist for psoriasis, biologic therapies have emerged as a significant advancement in its management. Biologic therapies specifically target the immune system, providing effective control over the symptoms of psoriasis. This article explores the recent advances in the field of biologic therapies for psoriasis. Biologic therapies are a class of drugs derived from living organisms, such as proteins or antibodies, which target specific molecules involved in the immune response. These therapies modulate the immune system, thereby reducing inflammation and slowing down the excessive growth of skin cells [1].

TNF inhibitors, such as etanercept, adalimumab, and infliximab, have been extensively studied and approved for the treatment of psoriasis. These drugs bind to TNF-alpha, a cytokine involved in the immune response, blocking its activity and reducing inflammation. TNF inhibitors have demonstrated significant efficacy in improving the symptoms of psoriasis, including reducing redness, scaling, and itchiness. IL inhibitors, such as ustekinumab and secukinumab, target specific interleukins, which are proteins involved in immune system regulation. Ustekinumab blocks IL-12 and IL-23, while secukinumab specifically inhibits IL-17A [2].

These drugs have shown remarkable efficacy in treating moderate to severe psoriasis by reducing inflammation and slowing down skin cell production. IL inhibitors are available in both subcutaneous and intravenous formulations. IL receptor inhibitors, such as brodalumab and guselkumab, target the receptors that bind to specific interleukins. Brodalumab inhibits the IL-17 receptor, while guselkumab targets the IL-23 receptor. These drugs have demonstrated significant efficacy in clearing psoriatic skin lesions, providing long-term remission in many patients [3].

Apremilast, a PDE-4 inhibitor, is an oral medication that modulates inflammatory signaling pathways within immune cells. It reduces the production of pro-inflammatory cytokines, such as TNF-alpha and IL-23, thereby reducing inflammation in psoriasis. Apremilast is an alternative for patients who prefer oral therapy or have contraindications to biologic agents. JAK inhibitors, such as tofacitinib and baricitinib,

are small molecules that block specific enzymes involved in the signaling pathways of various cytokines. These drugs have shown promise in the treatment of psoriasis by reducing inflammation and improving symptoms. However, JAK inhibitors are currently more commonly used for other immune-mediated conditions, such as rheumatoid arthritis. Safety and Side Effects [4].

While biologic therapies have shown significant efficacy in treating psoriasis, it is essential to consider their safety profile and potential side effects. Common side effects may include injection site reactions, respiratory infections, headaches, and gastrointestinal disturbances. Serious adverse events, such as serious infections and malignancies, although rare, have been reported with the use of biologic therapies. Regular monitoring and adherence to appropriate safety protocols are crucial when using these medications. The selection of biologic therapy for psoriasis should be based on various factors, including disease severity, patient preferences, medical history, comorbidities, and cost considerations. Dermatologists and healthcare providers play a vital role in assessing individual patient needs and tailoring treatment plans accordingly. Shared decision-making between the patient and healthcare provider is essential to achieve optimal outcomes [5].

### Conclusion

Biologic therapies have revolutionized the treatment of psoriasis by specifically targeting molecules involved in the immune response. TNF inhibitors, IL inhibitors, IL receptor inhibitors, PDE-4 inhibitors, and JAK inhibitors have all shown significant efficacy in reducing inflammation and improving symptoms in psoriasis patients. These therapies have provided new hope for individuals with moderate to severe psoriasis who have not responded well to traditional treatment options. However, it is important to consider individual patient factors, such as medical history and risk-benefit analysis.

### References

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